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(54) **Reciprocating saw**

(57) A reciprocating saw (10) includes a carrier (16) operable to cooperate with a motor (12) to translate rotational movement of the motor (12) into reciprocal linear actuation of a saw blade (20). A carrier (16) is slidably disposed within the housing (14) and includes a first portion (24) adapted to receive a saw blade (20) and a second portion (26) having a slot (102) therethrough. A rotatable element is fixed for rotation about an output shaft (130) of the motor. A follower (134) operably interconnects the carrier (16) and the rotatable element wherein rotation of the rotatable element provides reciprocal linear motion of the carrier (16) whereby the follower (134) follows a reciprocal linear path within the slot (102).

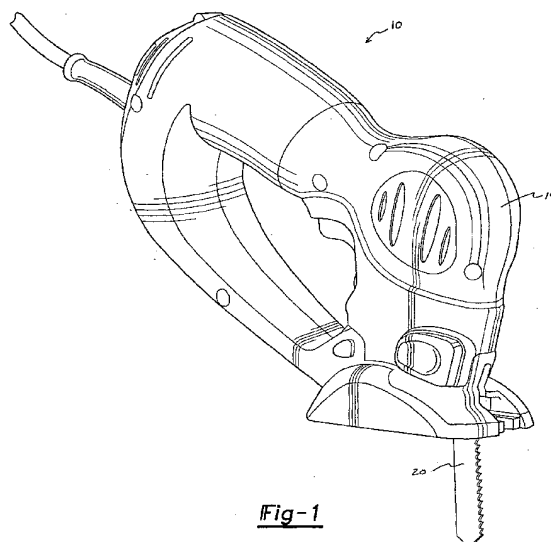


Fig-1

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EUROPEAN SEARCH REPORT

Application Number
EP 02 02 8488

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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X	US 2 627 882 A (BEN KLEINSMITH) 10 February 1953 (1953-02-10) * column 2, line 13 - column 3, line 6 * * column 4, line 1 - line 28; figures 2,3 *	1,2,11, 16,17 7,8	
A			
X	US 6 230 411 B1 (WALL DANIEL P ET AL) 15 May 2001 (2001-05-15) * column 4, line 23 - line 63; figures 1-3 *	9,10,18, 19,21-23	
X	FR 2 659 045 A (KUBAN PATRICK;CUCCU ROMAIN) 6 September 1991 (1991-09-06) * page 1, line 31 - line 38; figure 2 *	21	
X	DE 198 31 222 A (BLACK & DECKER INC) 5 January 2000 (2000-01-05) * column 2, line 46 - column 3, line 14; figures 1,2 *	20	TECHNICAL FIELDS SEARCHED (Int.Cl.7) B23D
X	US 5 987 758 A (LONG TRACY PATRICK ET AL) 23 November 1999 (1999-11-23) * column 3, line 32 - column 4, line 25; figures 2-6 *	20	
A	EP 0 582 326 A (SKIL EUROP BV) 9 February 1994 (1994-02-09) * column 1, line 57 - column 4, line 35; figures 1-5 *	20	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 9 March 2004	Examiner Frisch, U
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03 82 (P04C01)



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Application Number

EP 02 02 8488

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



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**LACK OF UNITY OF INVENTION
SHEET B**

Application Number
EP 02 02 8488

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-8, 11-17

A reciprocating saw comprising a carrier, a rotatable element and a follower for operably interconnecting said carrier and said rotatable element.

2. claim: 20

A reciprocating saw comprising a carrier with a clamp and cam member for the saw blade.

3. claims: 9,10,18,19,21-23

A reciprocating saw including a releasably attached base portion.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 02 02 8488

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

09-03-2004

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PUBN-DATE: July 9, 2003

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APPL-DATE: December 19, 2002

PRIORITY-DATA: US03832802A (January 2, 2002)

INT-CL (IPC): B23D051/10 , B23D051/16 ,
B23D049/16

EUR-CL (EPC): B23D049/16 , B23D051/02 ,
B23D051/10 , B23D051/16

ABSTRACT:

CHG DATE=20030902 STATUS=O>????A reciprocating saw (10) includes a carrier (16) operable to cooperate with a motor (12) to translate rotational movement of the motor (12) into reciprocal linear actuation of a saw blade (20). A carrier (16) is slidably disposed within the housing (14) and includes a first portion (24) adapted to receive a saw blade (20) and a second portion (26) having a slot (102) therethrough. A rotatable element is fixed for rotation about an output shaft (130) of the motor. A follower (134) operably interconnects the carrier (16) and the rotatable element wherein rotation of the rotatable element provides reciprocal linear motion of the carrier (16) whereby the follower (134) follows a reciprocal linear path within the slot (102). ?